

REMARKS

Claims 1-17 are pending in this application. Claims 11-17 have been withdrawn from consideration. Claim 1 has been amended to more particularly point out and distinctly claim the present subject matter.

Claim Rejections

Rejections Under 35 U.S.C. § 103

A. Response to rejection of claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over Ewen et al.

In response to the rejection of claims 1-10 under 35 U.S.C. 103(a) as being unpatentable over International Publication WO 01/44318 (U.S. Patent No. 6,635,779) of Ewen et al. (“Ewen”), Applicants submit that a *prima facie* case of obviousness has not been made out.

With respect to the rejection under §103, in order to establish a *prima facie* case of obviousness, the Examiner must establish all three of the following essential criteria: (1) the cited reference must teach or suggest each of the claimed elements (MPEP §2143.03); (2) there must be a motivation in the cited prior art to modify the reference as suggested by the Examiner (MPEP §2143.01); and (3) the cited reference must provide a basis for a reasonable expectation for success (MPEP 2143.02). The motivation to modify and the reasonable expectation for success must come from the cited prior art and not the Applicants’ specification. Further, it is not enough that a reference can be modified absent a suggestion in the cited prior art to undertake such modification (MPEP §2143.01).

First, the reference clearly does not teach each and every limitation of the claims, in that it does not disclose a process for preparing isotactic 1-butene copolymers having a content of at most 30% by mole of units derived from at least one alpha olefin of formula $\text{CH}_2=\text{CHZ}$, wherein Z is a C₃-C₂₀ hydrocarbon group.

Second, there is no motivation to modify the reference to arrive at the present claims as suggested by the Examiner. At most, the reference discloses (1) homopolymerization of olefins, including 1-butene (col. 22, lines 38-44); (2) copolymerization of propylene, including butene as a comonomer (col. 23, lines 8-18); and (3) copolymerization of ethylene with higher olefins

(including 1-butene) (col. 23, lines 23-31). Therefore, with respect to copolymers, only propylene copolymers and ethylene copolymers are disclosed.

The presently claimed subject matter is directed toward copolymers of butene with C₅-C₂₀ comonomers. Therefore, copolymers containing butene and propylene or butene and ethylene are clearly outside the scope of the claims. However, even if propylene or ethylene comonomers were included in the present claims, which they are not, it is well known to one skilled in the art that a 1-butene copolymer containing propylene as a comonomer in a maximum amount of 30 mol% is completely different than a propylene copolymer (i.e., greater than 50 wt% propylene).

Moreover, the reference is completely silent with regard to the specific amounts of butene in a propylene copolymer, except for Examples 50-53, where the maximum level of butene illustrated by these examples is 16.39 wt% in example 53. With respect to ethylene copolymers, the reference discloses that the ethylene copolymer can contain between 1% to 20% mole% of any comonomer.

The Examiner has pointed to col. 23, lines 8-36 of Ewen as teaching that the catalysts described in the present claims “can be used to copolymerize olefins such as 1-butene, 1-pentene, 1-hexene, etc.” (page 3, Office Action). However, Applicants respectfully point out that the cited passage recites

The catalysts according to the present invention can be used also in a process as described above for the copolymerization of propylene with one or more alpha-olefins such as for example ethylene, 1-butene, 1-pentene, 4-methyl-1-pentene, 1-hexene, 1-octene, 1-decene...Copolymers propylene/ethylene and propylene/1-butene are preferred. (emphasis added, col. 23, lines 8-16)

Therefore, copolymers of propylene with various monomers are described in this passage. There is neither teaching nor suggestion of butene copolymers containing C₅-C₂₀ alpha-olefins as comonomers. Merely because one could have employed a procedure to produce a butene/C₅-C₂₀ copolymer does not mean that the process would have been obvious. The Examiner has not demonstrated where in the cited reference there is a suggestion to perform the claimed process to produce the specific butene copolymer, and why one would modify the teaching of the reference

to perform such a process. The kind of suggestion which would strongly motivate one to perform the process. Therefore, no showing of a motivation to modify the teaching of the reference, as suggested by the Examiner, has been made out.

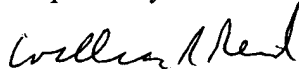
Finally, there would be no reasonable expectation of success in making such a modification since there would be no predictability in its outcome, in that butene copolymers are not disclosed in the reference at all. Therefore, none of the elements of a *prima facie* case have been made out by the Examiner. Reconsideration and withdrawal of the rejection respectfully is requested.

Applicants respectfully request that a timely Notice of Allowance be issued in this case. Should the Examiner have questions or comments regarding this application or this Amendment, Applicant's attorney would welcome the opportunity to discuss the case with the Examiner.

The Commissioner is hereby authorized to charge U.S. PTO Deposit Account 08-2336 in the amount of any fee required for consideration of this Amendment.

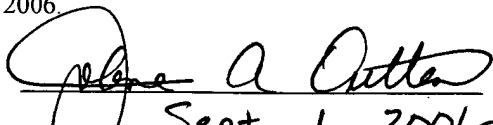
This is intended to be a complete response to the Office Action mailed May 9, 2006.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with sufficient postage thereon with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on September 1, 2006.


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